

THEHANFORDSITE

Direct-Feed Low-Activity Waste Program Update

Tom Fletcher

Assistant Manager for the Waste Treatment and Immobilization Plant Project



Safety Message

Management engagement and time in field

- Maintaining operational awareness is a priority
- Line managers are in close contact with the front-line employees
- Line managers listen and act on real-time operational information
- Line managers identify critical performance elements and monitor them closely







Topic of Briefing

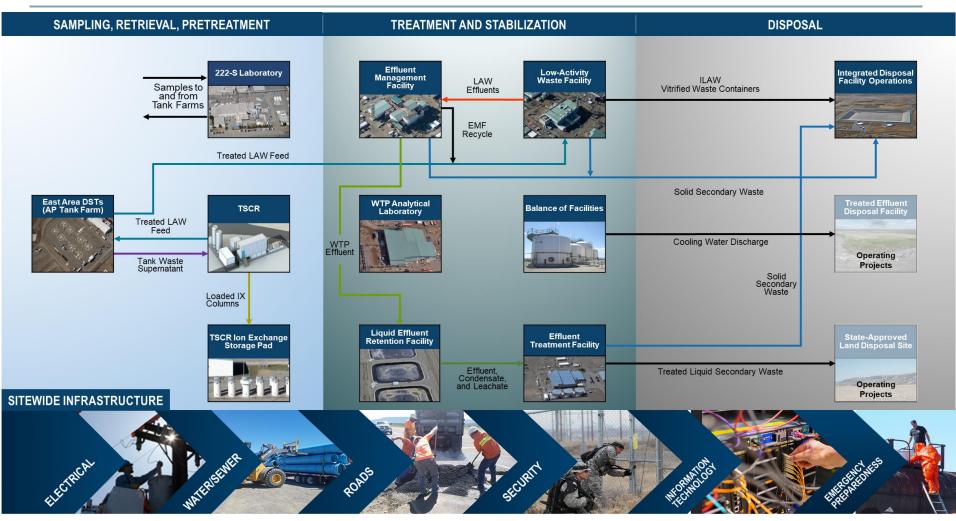
- What is the purpose of the briefing?
 - Update on the scope of the DFLAW Program as integrated systems and components transition through startup and preparation for operations
- Related HAB Work Plan issue
 - Transition all Low-Activity Waste (LAW) Facility, Analytical Laboratory, and Balance of Facilities systems to commissioning





THE HANFORD SITE

DFLAW Program



DST double-shell tank **EMF**

Effluent Management Facility immobilized low-activity waste

ILAW ion exchange LAW low-activity waste

TSCR tank-side cesium removal

WTP Waste Treatment and Immobilization Plant







DFLAW Target Milestones

| TARGET MILESTONE | CY 2020 J F M A M J J A S O N D J F M FY 2020 FY 2 | CY 2021 AMJJASONE 021 | CY 2022 D J F M A M J J A S O N D S FY 2022 | CY 2023 J F M A M J J A S O N D FY 2023 FY 2024 |
|---------------------|--|-----------------------------|---|--|
| TM01-LAW | LAW Facility Construction (5HLC1TOV820) | | | |
| TM05-EMF | LEGEND | | | |
| TM03-ILAW | LAW transporter and pallet fabrication complete (Z3-CE10-06) TSCR construction (Y326-1702-112) | | | |
| TM04-TSCR | | | | |
| TM07-LAW | LAW Facility startup testing complete (5HLC107600) | | | |
| TM06-ETF | APTF IDF LWPF available for cold CX waste (ETFSUM038400) | | | |
| TM08-TSCR | AFIF | ♦ WFD | CX and operations – DOE ORR | (Y326-2201-01370) |
| TM09-LAW | EMF | ♦ LA | W Facility – CX – conduct LOP to | est (5HLC3JAB6321) |
| TM02-IDF | APTF – AP Tank Farm | | | |
| TM10-EMF | CX – commissioning CY – calendar year DOE – U.S. Department of Energy | • | WTP effluent – EMF water runs | complete (5HLC3JAB6301) |
| TM11-LAW | EMF – Effluent Management Facility ETF – Effluent Treatment Facility FY – fiscal year | • | LAW - CX - Melter 1 heat-up (5 | HLC3JAB6331) |
| TM12-TSCR | IDF – Integrated Disposal Facility ILAW – immobilized low-activity waste LAW – low-activity waste | • | TSCR operations commence (I | 0) |
| TM14-APTF | LOP – low-adding water LOP – loss of power LWPF – Liquid Waste Processing Facilities ORP – U.S. Department of Energy, Office of River Protection | | Tank farms ready to feed | I LAW Facility (IO50) |
| TM15-LAW | ORR – operational readiness review TSCR – Tank-Side Cesium Removal | | ◆ LAW – Operations – S | Start cold CX (5HLC2A0110) |
| TM16-WIR | WFD – Waste Feed Delivery WIR – Waste Incidental to Reprocessing WTP – Waste Treatment and Immobilization Plant | WIR approval (1T2620) | | |
| TM13-ETF | LWPF available for hot CX waste (ETFSUM038450) | | | |
| TM17-IDF | | IDF readiness ap | oproval (OPS.R.1305) | |
| TM18-LAW | LAW - Conduct Contractor ORR (5HLC3JA17294) | | | |
| TM19-LAW | LAW – Operations – ORP approval to proceed with hot CX (5HLC3JA00321) | | | |
| TM20-LAW | | Successful demor | nstration of hot CX (1AF91LBLCC | Working schedule subject to change. Data Date (WTP): December 14, 2020 Data Date (Non-WTP): April 19, 2021 |







Waste Treatment and Immobilization Plant Big Picture



Low-Activity Waste Facility



Ecology, Touring Analytical Laboratory



Effluent Management Facility C5 Floor Coating Complete



Effluent Management Facility Vessels







Waste Treatment and Immobilization Plant Big Picture (cont.)



Maintenance on Completed Systems



Effluent Management Facility Handover Completed



Mechanical Handling System Crane Load Test



Simulator Team Training for Plant Management Control Room





THE HANFORD SITE

Tank Farms Project Big Picture



Tank-Side Cesium Removal (TSCR) Ion Exchange Columns (IXC) Restraints and Pad



TSCR Feed Pump Installation



TSCR IXCs and Filters Installed and Prepared for Operational Acceptance Test



TSCR Transfer Lines Backfilled to WTP Connection Point







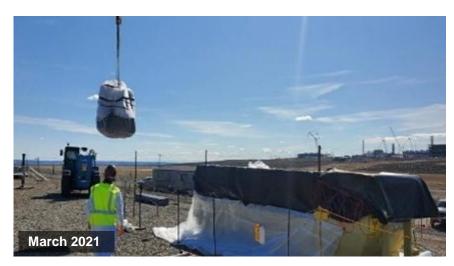
Tank Farms Project Big Picture (cont.)



ETF Ultraviolet/Oxidative (UV/OX) Concrete Pad Removal



New ETF UV/OX Units Being Received



LERF Basin 44 Cover Cleaning Waste



LERF Basin 44 Cover Clean





THE HANFORD SITE

Mission Support Big Picture



200 West Area Potable Water Tank Replacement Pumps Delivered



Pump Delivery for Raw Water System Upgrade



Electrical Infrastructure Upgrades To Provide More Power



Improving Service on 7th Street with New Electrical Boxes







Integrated Disposal Facility Big Picture



Integrated Disposal Facility Aerial View



Leachate Collection Tank Dome Construction



Leachate System Column Install



Lights in Immobilized Low-Activity Waste Receiving Area

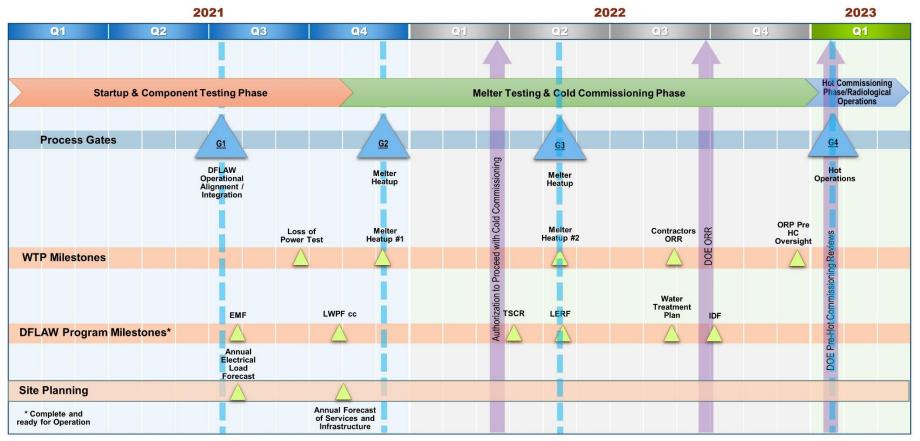






Phase-Gate Process: One Hanford Validation

DFLAW Phase Gate Process



Based on Integrated Schedule December 2020







Key Takeaways

DFLAW Program fitness

- DFLAW projects advancing as planned visible progress and positive momentum
- WTP dangerous waste and air permitting on track
- Operational focus
 - DFLAW feed qualification sample and glass formulation nearing completion
 - Operational emphasis; preparations for 24/7 Hanford Site operations
 - DFLAW Program Phase-Gate Process One Hanford validation



